

Amendments to the Drawings:

The attached replacement drawing sheet makes changes to Figs. 1A and 1B and replaces the original sheet with Figs. 1A and 1B.

REMARKS

By this Amendment, Applicants amend claims 1, 6, 12, and 16, cancel claims 9 and 19 without prejudice or disclaimer of the subject matter contained therein, and add claims 21 and 22. Accordingly, claims 1-8, 10-18, and 20-22 are pending in this application. Support for amended claims 1, 6, 12, and 16 and new claims 21 and 22 may be found at least in original claims 9 and 19, paragraphs [0086]-[0099], and Figs. 18-20. No new matter is added. Applicants respectfully request consideration and prompt allowance of the pending claims at least in light of the following remarks.

The Office Action objects to Figs. 1A and 1B under MPEP § 608.02(g). By this Amendment, Applicants attach replacement Figs. 1A and 1B including the legend "Prior Art," as suggested by the Office Action. Applicants respectfully request withdrawal of the objection.

The Office Action rejects claims 1-6, 10-16, and 20 under 35 U.S.C. §102(b) over U.S. Patent 6,276,781 to Hasegawa et al. (hereinafter "Hasegawa"). Applicants respectfully traverse the rejection.

As the Office Action correctly recognizes, Hasegawa does not disclose, teach, or suggest the features of canceled claims 9 and 19. By this Amendment, Applicants amend claims 1 and 12 to include the features of canceled claims 9 and 19, respectively. Accordingly, claims 1 and 12 are patentable over Hasegawa for at least the reasons that canceled claims 9 and 19 are patentable over Hasegawa.

Additionally, Hasegawa does not disclose, teach, or suggest "a plurality of first contact lands extending from respective ones of said driving electrodes along a surface of the piezoelectric sheet," as recited in claims 1 and 12.

The Office Action alleges that connecting electrode 115 in Hasegawa is equivalent to Applicants' claimed first contact land. However, as shown in Fig. 2B of Hasegawa, the

connecting electrode 115 extends in a direction perpendicular to the surface of the piezoelectric sheet 112. Hasegawa thus cannot reasonably be considered to disclose, teach, or suggest "a plurality of first contact lands extending from respective ones of said driving electrodes along a surface of the piezoelectric sheet," as recited in claims 1 and 12. Accordingly, at least this feature of claims 1 and 12 provide an additional basis of patentability over Hasegawa.

As discussed above, claims 1 and 12 are patentable over Hasegawa. Applicants respectfully submit that claims 2-6, 10, 11, 13-16, and 20 are patentable over Hasegawa for at least the reasons that claims 1 and 12 are patentable, as well as for the additional features they recite.

The Office Action rejects claims 7-9 and 17-19 under 35 U.S.C. §103(a) over Hasegawa in view of U.S. Patent 6,808,254 to Sakaida et al. (hereinafter "Sakaida"). Applicants respectfully traverse the rejection.

By this Amendment, Applicants incorporate the features of claim 9 and 19 into claims 1 and 12, respectively. Accordingly, Applicants will address this rejection with respect to claims 1, 7, 8, 12, 17, and 18.

In order to establish a prima facie case of obviousness, three criteria must be met (MPEP §§ 2142, 2143). 1) There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to the skilled artisan, to modify the reference or combine reference teachings. 2) There must be a reasonable expectation of success. 3) The prior art reference (or references when combined) must teach or suggest all of the claim limitations. The first two criteria must both be found in the prior art, and not based on Applicant's disclosure.

Applicants respectfully submit that the Office Action fails to satisfy the first and third criteria. Applicants will address the third criteria and then the first criteria below.

As discussed above, Hasegawa does not disclose, teach, or suggest all of the features of claim 1. Sakaida does not make up for this deficiency of Hasegawa. For example, Sakaida fails to disclose, teach, or suggest "a plurality of first contact lands extending from respective ones of said driving electrodes along a surface of the piezoelectric sheet," as recited in claim 1. In fact, Sakaida does not disclose, teach, or suggest the use of contact lands at all. To the contrary, as shown in Fig. 7 of Sakaida, the individual electrodes (drive electrodes 36) are connected to a power supply using wires 36a extending to the side edge surfaces of the piezoelectric sheets (col. 8, lines 54-58 of Sakaida).

Furthermore, in rejecting canceled claims 9 and 19 (now part of claims 1 and 12) the Office Action alleges that Sakaida discloses that the driving electrodes 36 are arranged such that the acute angle corners of one driving electrode is located between the acute angel corners of other driving electrodes adjacent to the one driving electrode. However, Applicants respectfully point out that this is neither the language nor feature of canceled claims 9 and 19. Claims 1 and 12 recites that the "driving electrodes are arranged such that said first contact land extending from one driving electrode is placed between two driving electrodes adjacent to said one driving electrode." Because Sakaida fails to disclose, teach, or suggest contact lands, Sakaida cannot reasonably be considered to disclose, teach, or suggest that the "driving electrodes are arranged such that said first contact land extending from one driving electrode is placed between two driving electrodes adjacent to said one driving electrode," as recited in claims 1 and 12.

Because, as discussed above neither Hasegawa nor Sakaida disclose, teach, or suggest all of the features of claims 1 and 12, claims 1 and 12 are patentable over the combination of the Hasegawa and Sakaida. Further, Applicants respectfully submit that claims 7, 8, 17 and 18 are patentable for at least the reasons that claims 1 and 12 are patentable as well as for the additional features they recite. Applicants respectfully request withdrawal of the rejection.

Finally, the Office Action alleges that, at the time of the invention, it would have been obvious for a person of ordinary skill in the art to use the parallelogram shaped electrodes of Sakaida in the printer head of Hasegawa for the benefit of large and efficient pressure fluctuations in the pressure chambers of Hasegawa. Presumably, the Office Action is relying on col. 8, lines 4-47 of Sakaida for this alleged motivation. However, Applicants respectfully submit that col. 8, lines 4-47 of Sakaida do not provide the Office Action's alleged motivation.

Col. 8, lines 4-47 of Sakaida teaches that electrodes which are shaped similar to but slightly smaller than the ink pressure chambers result in large and efficient pressure fluctuations in the pressure chambers. The fact that the pressure chambers in Sakaida are parallelograms is a separate design choice. If a skilled artisan were to apply this teaching of Sakaida to the ink jet head of Hasegawa, they would be motivated to make the individual electrodes shaped similar to but slightly smaller than the rectangular pressure chamber 103, disclosed in Hasegawa, resulting in rectangular individual electrodes. Accordingly, the Office Action has failed to provide any suggestion or motivation, either in the references themselves or in the knowledge generally available to the skilled artisan, to modify the reference or combine reference teachings as required by MPEP §§ 2142, 2143.

In view of at least the foregoing, Applicants respectfully submit that this application is in condition for allowance. Applicants earnestly solicit favorable reconsideration and prompt allowance of claims 1-8, 10-18, and 20-22.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, Applicants invite the Examiner to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

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JAO:JOC/tea

Attachment:
Replacement Sheet

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